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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,141	01/15/2002	Song Zhang	PD05970AM	4263

22917 7590 02/11/2005

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EXAMINER

WANG, ALBERT C

ART UNIT PAPER NUMBER

2115

DATE MAILED: 02/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/047,141	Applicant(s) ZHANG ET AL.	
	Examiner Albert Wang	Art Unit 2115	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-52 is/are pending in the application.  
     4a) Of the above claim(s) 25 and 48-52 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-24 is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-15 and 26-47 is/are rejected.
- 7) ☒ Claim(s) 6 and 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)          |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. <u>20050131</u> .                                    |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>7/21/03</u> .   | 6) <input type="checkbox"/> Other: _____.                                   |

### **DETAILED ACTION**

1. Original claims 1-52 are pending.

#### ***Election/Restrictions***

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-24 and 26-47, drawn to monitoring power supplies coupled cable access units over a network with an operator unit, classified in class 713, subclass 340.
  - II. Claim 25, drawn to an access unit with power supply monitoring, classified in class 702, subclass 63.
  - III. Claims 48-52, drawn to an operator unit for network monitoring, classified in class 709, subclass 224.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because invention I does not rely on the details of the detection unit as described in claim 25. The subcombination has separate utility such as a cable access unit with a detection unit for power supply monitoring.

Inventions I and III are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the

Art Unit: 2115

subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because invention I does not rely on the details of the analyzation unit and operator interface as described in claim 25. The subcombination has separate utility such as an operator unit for network management.

Inventions II and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention III has separate utility such as an operator unit for network management. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for either Group II or Group III, and that for Group II is not required for Group III, restriction for examination purposes as indicated is proper.

During a telephone conversation and email with Robert Marley (Reg. No. 32,914) on January 21, 2005 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-24 and 26-47. Affirmation of this election must be made by applicant in replying to this Office action. Claims 25 and 48-52 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

#### ***Claim Objections***

3. Claim 36 is objected to because of the following informalities: “suppling” is misspelled. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5, 12, 13, 26-29, 35, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al., U.S. Patent No. 5,961,604 ("Anderson"), in view of Compaq, "Uninterruptible Power Supply Management Information Base for SNMP Network Management", 2000.

As per claim 1, Anderson teaches a communications system comprising:

a communication distribution network (fig. 1, system 20 with network; fig. 11, system 320 with network 322);

a plurality of communication cable access units coupled to the communication distribution network (fig. 1, device 28; col. 2, lines 30-36), at least one of the cable access units each receiving power from a respective power supply powered by a main power source (fig. 4, within UPS 50), at least one of the cable access units adapted to monitor the status information generated by said respective power supply (fig. 4, server/interface 54 monitors UPS 50; col. 3, lines 15-21);

an operator unit coupled to said network (figs. 2 & 3, network management device 38), said operator unit adapted to monitor at least one of the cable access units via two-way communication (fig. 5, two-way interfaces; col. 28-33); and

Art Unit: 2115

a user interface coupled to said operator unit, and said operator unit adapted to display an indication of the monitored status information on said user interface (figs. 7 & 8, browser pages showing status information are displayed on a user interface).

However, Anderson does not expressly teach said power supply having a backup power source. Anderson's power supply is an uninterruptible power supply, abbreviated as UPS (fig. 4, UPS 50; col. 2, lines 30-36). Compaq teaches monitoring both an AC line and a battery in a UPS (cpqUpsLineStatus; cpqUpsEstimatedBatteryLife). At the time of the invention, it would have been obvious to one of ordinary skill in the art that Anderson's UPS has a backup power source, since it is well known in the art to include a backup power source to improve reliability.

Compaq further teaches monitoring the purpose and version of supported MIB and modules, indicating the capability of the cable access unit to check and record said status information (cpqUpsMibRev, cpqUpsCommonModule)

As per claim 2, Anderson teaches the power supply is further adapted to generate said status information on the backup power source wherein said status information generated is selected from at least one of backup power source on information, backup power source missing information, and backup power source needing replacement information (col. 4, lines 43-50).

As per claims 3 and 4, Anderson teaches said operator unit is further adapted to generate an alarm message, including an identification of the associated cable access unit, on the user interface (figs. 7 & 8, display alarm and identification on browser pages). Compaq teaches SNMP trap messages for a backup power source (cpqUpsBatteryLow; cpqUpsPendingBatteryFailure).

As per claim 5, Anderson teaches the operator unit is further adapted to monitor a plurality of cable access units located at respective different subscriber premises (fig. 9).

As per claim 12, Compaq teaches said backup power supply is a battery (cpqUpsEstimatedBatteryLife).

As per claim 13, Anderson teaches the cable access unit further comprises a hardware unit adapted to detect the status information from the power supply, and a processor unit adapted to check whether the cable access unit can acquire the backup power source status information and to receive the status information from the hardware unit when acquired and also report said status information back to said operator unit via said network responsive to a request from said operator unit for such status information when received at the cable access unit (col. 3, lines 47-61).

As per claim 26, Anderson teaches a system for remote sensing of power supply states, said system comprising:

a communications network (fig. 1, system 20 with network; fig. 11, system 320 with network 322);

a power supply located at or near a customer's premises (fig. 1, device 28 near subscriber premises 26; col. 2, lines 30-36, uninterruptible power supply), said power supply powered by a power source, said power supply generating one or more power supply status indications (fig. 4, status information from UPS 50 via cable 64; col. 3, lines 15-21);

a cable access unit coupled to said power supply (fig. 4, server/interface 54 of device 28), said cable access unit coupled to said network (via cable modem 56), said cable access unit

Art Unit: 2115

powered by said power supply (col. 3, lines 3-9, UPS 50 supplies power to CATV trunk for powering device 28), said cable access unit monitoring one or more of said generated power supply status indications (fig. 4, server/interface 54 monitors UPS 50; col. 3, lines 15-21);

an operator unit coupled to said network, said operator unit communicating with said cable access unit to ascertain at least one of said monitored power supply indications (figs. 2 & 3, network management device 38; col. 3, lines 20-27); and

a user interface coupled to said operator unit, said operator unit displaying on said user interface an indication of at least one of said ascertained power supply indications (figs. 7 & 8, browser pages showing status information are displayed on a user interface).

However, Anderson does not expressly teach said power supply having a backup power source. Anderson's power supply is an uninterruptible power supply, abbreviated as UPS (fig. 4, UPS 50; col. 2, lines 30-36). Compaq teaches monitoring both an AC line and a battery in a UPS (cpqUpsLineStatus; cpqUpsEstimatedBatteryLife). At the time of the invention, it would have been obvious to one of ordinary skill in the art that Anderson's UPS has a backup power source, since it is well known in the art to include a backup power source to improve reliability.

As per claim 27, Anderson teaches wherein said one or more generated power supply indications is selected from one or more of backup-on, backup-missing, and backup-replace (col. 4, lines 43-50).

As per claim 28, Compaq teaches setting the polling frequency for carrying out said communication (cpgUpsOsCommonPollFreq).

As per claim 29, Anderson teaches protocol for carrying out communication by pinging (col. 3, lines 47-53).

As per claim 35, Anderson teaches a method for remote sensing and display by an operator unit of power supply states of power supplies (figs. 2 & 3, by network management device 38; col. 2, lines 30-36; col. 3, lines 20-27; figs. 7 & 8, display), each of said power supplies coupled to a respective cable access unit (fig. 4, UPS 50 coupled to server/interface 54 of device 28), each of said cable access units coupled to said operator unit (fig. 4, via cable modem 56; col. 3, lines 20-27), each of said power supplies powered by a respective power source, said method comprising:

a) generating, by at least one of said power supplies, a respective power supply status in response to the occurrence of at least one predetermined condition (fig. 4, status information from UPS 50 via cable 64; col. 3, lines 15-21);

b) monitoring, by at least one of said cable access units, the power supply status of the respective power supply (fig. 4, status information to server/interface 54 via cable 64; col. 3, lines 15-21);

c) reading, by said operator unit, identifiers of at least one alarm condition and addresses of at least one of said cable access units to be monitored (col. 4, lines 43-50 & 60-67);

d) communicating with said one or more cable access units by said operator unit to ascertain the power supply status of said respective power supplies (col. 4, lines 34-38);

e) analyzing one or more of said communicated power supply statuses to determine whether any alarm conditions have been generated by said power supplies (col. 6, lines 1-12, by intelligence required by the network manager to display data); and

Art Unit: 2115

f) displaying by said operator unit, responsive to said analyzing indicating at least one alarm conditions have been generated, an indication of at least one alarm conditions and the respective generating power supply on a user interface associated with said operator unit (figs. 7 & 8, display alarm and power supply on browser pages).

While Anderson is silent with respect to said operator unit coupled to a storage location, Anderson does teach that each cable access unit is coupled to a storage location, and that such hardware is implicit and understood by one of ordinary skill in the art (col. 3, lines 53-61, RAM and ROM memory). Thus, since Anderson teaches implementing the operator unit with standard hardware (col. 5, lines 1-6), it would have been obvious to one of ordinary skill in the art that there is a corresponding storage location for Anderson's operator unit.

However, Anderson does not expressly teach each power supply having a respective backup power source. Anderson's power supply is an uninterruptible power supply, abbreviated as UPS (fig. 4, UPS 50; col. 2, lines 30-36). Compaq teaches monitoring both an AC line and a battery in a UPS (cpqUpsLineStatus; cpqUpsEstimatedBatteryLife). At the time of the invention, it would have been obvious to one of ordinary skill in the art that Anderson's UPS has a backup power source, since it is well known in the art to include a backup power source to improve reliability.

As per claim 43, since Anderson/Compaq teaches the method of claim 35, Anderson/Compaq teaches the claimed computer program product.

Art Unit: 2115

5. Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson/Compaq, as applied to claim 4 above, and further in view of Liu et al., U.S. Patent No. 6,602,627 ("Liu").

As per claim 8, Anderson does not expressly teach said backup power supply is a secondary alternating current power feed. Liu teaches a secondary alternating power feed (fig. 1, AC input signal 2). At the time of invention, it would have been obvious to one of ordinary skill in the art to substitute Liu's battery alternative for Anderson/Compaq's backup power supply, as such a configuration is common (Liu, col. 1, lines 34-42).

As per claims 9 and 10, Liu teaches a generator with fuel cells (fig. 1, generator 22 with fuel cell stack 32; col. 4, lines 12-18).

As per claim 11, Liu teaches using low cost energy sources (col. 1, lines 34-42).

6. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson/Compaq, as applied to claim 1 above, and further in view of Beveridge, U.S. Patent No. 6,393,105.

As per claim 14, while Anderson teaches a communications network, Anderson does not expressly teach user devices adapted to receive at least one of communications and data over the network. User devices are subscribers to receive information. Beveridge teaches coupling user devices to a cable access unit to receive communications or data over a network (fig. 1, coupled to network interface unit 44). At the time of the invention, it would have been obvious to one of ordinary skill in the art to couple user devices to the cable access unit, as user devices are commonly used to receive information.

As per claim 15, Beveridge teaches a phone unit and a television (col. 2, lines 30-35).

7. Claims 30-34, 36-42, and 44-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson/Compaq, as applied to claim 29 above, and further in view of American Power Conversion, "PowerNet SNMP Management Information Base (MIB)", v3.0.0, December 1997 ("APC").

As per claims 30-34, Anderson does not expressly teach conditions for all the power supply indications. APC teaches power supply indications that apply (p. 14, UPS Battery OIDs; p18, UPS Output OIDs). At the time of the invention, it would have been obvious to one of ordinary skill in the art to apply APC's power supply indications to Anderson/Compaq's system, in order to provide extended functionality.

As per claims 36-42, since Anderson/Compaq/APC teaches the system of claims 20-34, the combination teaches the claimed method.

As per claims 44-47, since Anderson/Compaq/APC teaches the system of claims 20-34, the combination teaches the claimed computer program product.

***Allowable Subject Matter***

8. Claims 6 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 16-24 are allowed.

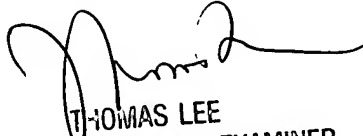
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert Wang whose telephone number is 571-272-3669. The examiner can normally be reached on M-F (9:30 - 6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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February 2, 2005

  
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